DOCUMENT RESUME

ED 364 094 FL 021 668

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TITLE The Syntactical Problems Chinese College Students Meet in Reading English Technical Textbooks.
PUB DATE 93
NOTE 15p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Chinese; College Freshmen; English (Second Language); *English for Academic Purposes; English for Special Purposes; Foreign Countries; Grammar; Higher Education; *Phrase Structure; *Prepositions; *Reading Comprehension; *Reading Difficulties; Syntax; Teaching Methods; Technical Writing; *Textbooks; Translation
IDENTIFIERS *Taiwan

ABSTRACT

Taiwanese college students have significant difficulty in reading technical texts in English. Based on information gathered from students in freshman English classes in Taiwan, and on previous research, three significant areas of student confusion are: (1) frequent use of prepositions, particularly when an English preposition with multiple meanings is used with a marker in Chinese that is similar to the genitive case; (2) use of a relative clause that interrupts the subject-verb-object sequence of an independent clause, e.g., "the money that you gave him...," especially difficult in the lengthy sentences of a technical text; and (3) failure to look at the English phrase as a whole instead of individual words. Two techniques are found useful for helping Chinese students overcome these difficulties. The first, the phrase structure approach, requires students to become familiar with the rules and elements that build noun, verb, adjectival, and adverbial phrases and learn to identify and manipulate them. The second, designed to bridge the gap between secondary school and college English reading instruction, involves identifying and translating specific structures in short passages. It uses a large number of passages on varied topics, arranged by sentence complexity. Students have responded very positively to this approach. (MSE)

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ED 364 094

The Syntactical Problems Chinese College Students Meet In Reading English Technical Textbooks

Abstract

In Taiwan, college students are expected to read technical textbooks written in English. Typically, the students find ways to avoid reading the textbooks, often complaining that it takes too long to read these texts written in English. Based on data collected in college freshman English classes in Taiwan, the author has determined that there are three areas that are the most problematic for the students in Taiwan: confusion due to the arbitrary and prolific uses of English prepositions, confusion caused by the relative clause that interrupts the subject-verb-object sequence of the independent clause, and failure to look at a phrase as a whole. Two teaching approaches attempting to solve these problems are presented in the paper.

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Submitted to ERIC, November 11, 1993.

FL 021668

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The Syntactical Problems Chinese College Students Meet In Reading English Technical Textbooks

The Committee of the University Joint Entrance Examination in Taiwan (1990) reported that in 1990, the 117,895 examinees who took the English test gained an average of 23.72 out of 60 points. This figure indicates a very low learning achievement gained by those high school graduates in English learning. This low average point is just one of the continuing indicators of the long-term failure of high school English instruction in Taiwan.

This English learning experience carries over to the university level where students are required to read technical textbooks written in English. University level English Instruction involves delivering notes and lectures in Chinese and English translation. Most teachers believe that assigning textbooks for the students to read will eventually stimulate students to come up with a way to read English on their own.

College students, on the other hand, know a variety of strategies to deal with reading English technical textbooks. They may cooperate by reading and translating a few paragraphs per person; they may buy a translated version; they may listen carefully and take notes in class. No matter what methods they use, they do not deal directly with reading textbooks in English.

Those students who do read English textbooks often complain that it takes 2 hours to finish just one page. What is more, even having checked all

the vocabulary words, they can only get a vague idea of the information. This problem shows from the fact that Chinese students start learning English as a foreign language at the age of 13. By this time, a child is completely linguistically mature in the use of sentence structures (Palermo, & Molfese, 1972). Further, the high schools use a skills-oriented approach in which vocabulary words, idioms, and syntax are learned out of context, and reading instruction consists of translating sentence by sentence.

In the college freshman English classroom, it is common to see students checking dictionaries for most vocabulary words, reading slowly, and confused by complicated sentence structures. The inability to comprehend the text, however, could often be ameliorated by pointing out structures of the sentences. This points to the fact that many students do not have a clear understanding about English sentence structure which could help their comprehension.

Based on data collected in college freshman English classes in Taiwan, I have found three areas that are the most problematic for college students in reading English technical textbooks. These three areas are those that vary most widely between the English and Chinese languages. In this article, two teaching approaches attempting to solve these problem areas will be presented.

Three Problem Areas

Confusion due to the arbitrary and prolific uses of English prepositions

According to Granowsky and Botel (1974), prepositional phrases abound in the English language. This syntactic feature plays an important part in expanding the length of English sentence. Jin (1982) states that prepositions in English are so active, so important and yet sometimes so arbitrary that there are no simple rules for students to follow. He further points out that "Prepositions are not only capable of forming prepositional phrases with nominals but also capable of following nouns, adjectives, and verbs, forming a large number of set phrases and verbal phrases" (p. 89). Further, most prepositions possess multiple meanings.

This complexity interacts with the single use of a marker "de" in Chinese, which is similar to the genitive case of many languages (Norman, 1988), to replace all the properties of English prepositions in forming noun and prepositional phrases. For example,

(1) the development of light industry
    light industry de development
(2) the basis for discussion
    discussion de basis

(3) the emphasis on meaning

meaning de emphasis

(4) the cookie behind the jar (location)

at-jar-back de cookie

The single use of "de" may place more demands on Chinese EFL students' learning of the properties of each English preposition. However, this learning difficulty is further complicated by the inversion of the meaning flow of each noun phrase. As the examples from (1) to (4) reveal, the nouns at the phrase initial position are inverse to the phrase final position, which demands more processing effort.

Furthermore, if we look at the use of one preposition connecting two nouns as one level of meaning relationship, two prepositions used in a noun phrase indicate two levels of meaning relationship as the following phrase shows:

(5) the cost of the product of the company

the company (de) product de cost

This demands even more processing effort, since students have to know that the cost belongs to the product and the product belongs to the company. If the concepts are more abstract, the processing for comprehension is even slower or it may breakdown entirely.

Confusion caused by the relative clause that interrupts the subject-verb-object sequence of the independent clause

According to Marcus (1971, p. 58), "Complex sentences in which a relative clause interrupts the subject-verb-object sequence of the independent clause are more difficult for the students to understand." Relative-clause-related sentence structures include four items: complex sentences where the relative clause modifies the subject; complex sentences where the relative clause modifies the object; complex sentences where the relative clause modifies the object of the preposition; and complex sentences with two or more relative clauses (Marcus, 1971).

Marcus (1971, p. 58) points out, "These complicated sentences may cause some students (native speakers) to mistakenly think that a coincidental noun-verb-noun sequence of words is a subject-verb-object sequence and thus a kernel sentence of the larger sentence." It is logical to believe that those EFL students share the same problem in reading English. However, EFL students encounter more complex problem than native speakers do, because the "de", as used to replace most English prepositions, is also used to mark modifying clauses (Norman, 1988). It replaces the English relative clause markers such as who, whom, that, which, where, and when. The flow of meaning is also inverted. For example,

(6) the money that you gave him

you give him de money

(7) people who like to read

like read de people

Processing for comprehension demands much great effort for EFL students due not only to the inversion and single use of "de", but also because English sentences are much longer in technical textbooks. As Hanania and Akhtar's study on 20 MS theses in Biology, Chemistry, and Physics (1985) has shown, each T-unit (a terminal unit which includes one main clause plus subordinate clauses that are attached to it or embedded within it) averages 18.2 words for Biology, 17.6 words for Chemistry, and 17.8 words for Physics.

Failure to look at the phrase as a whole

Jin (1982) points out that Chinese students tend to look at phrasal verbs one word at a time. It is also very common in college Freshman English classes in Taiwan to see the students fail to consider a preposition as part of a chunk that connects a verb or a noun several words away. According to Neuwirth (1976, pp. 28-29), "Reading comprehension depends on the ability to recognize the relevant surface syntactic structures, to comprehend the kinds of relations they represent, and to relate the content at each level to the mean-

ing of the whole." Most EFL students are unable to recognize surface syntactic structures.

The inability to view a phrase as a syntactic whole may be due to several factors. Students may lack syntactic schemata because they do not fully understand the English sentence structure. They may not have encountered such phrases before, or they may be confused by the use of too many unrelated prepositions following a given verb or noun, such as "invite students to participate in some ways, perhaps by ...", or language variation may lead to confusion; in this case, the order of meaning flow. The following uses of verbs may serve as examples;

(8) He gave away his books, or He gave his books away.

He bǎ his books give away.

(9) He cut the tree with an ax.

He iòng ax cut the tree.

(10) He lives in the house.

He live tzài that house inside.

The "bǎ" in (8) is used to signal a will. The "iòng" in (9) is used to replace the instrumental prepositions such as "with". "Iòng" can be a verb by itself; but when it is used with other verbs, it becomes a series verb (Bin, 1991). The "tzài" in (10) is used with English prepositions expressing time or location.

The way in which meaning flows within complicated sentences demand more conscious processing for comprehension. College teachers in Taiwan commonly complain about difficulties in translating English into Chinese. Students also complain that they are often lost in "chunking" meaning units in reading English textbooks.

Teaching strategies

In college Freshman English classes, students tend to behave in a passive manner, read slowly, and write incomprehensible sentences. Their passivity may be due to long failure experiences with English and helpless feelings when confronted by English textbooks. To help such students learn to read and eventually read to learn, I have developed two approaches which are integrated into freshman English classes.

Phrase Structure Approach The phrase structure rules: S -> NP VP; VP -> V (NP) (PP); NP -> Det Adj N (PP) (RC) (Horrocks, 1987, p. 32), were explained to students, using the phrases taken from their technical textbooks. When students were familiar with the rules and the elements that build noun phrases, verb phrases, adjectival phrases, and adverbial phrases, they were asked to write the same kinds of phrases for the correction and discussion with groupmates and pay attention to the semantic properties of the prepositions. After this, they were asked in groups of 3 to bring in technical

textbooks and were assigned two or three long paragraphs a week to look for the same phrase structures and prepare for class presentation.

Number Underline-Translation Approach (NUTA) This approach was developed to fill in the gap between high school and college English reading instruction. It includes carefully chosen expository writings from astronomy, ocean, or biology, with a (native speaker) readability estimate of 7-8 grade levels. Each selection is below 250 words in length and carries a single obvious topic such as "Snakes", "The Heart", "The Space Shuttle", or "How Fish Swim".

In my first book using this approach, I collected 110 topics. The topics were arranged in order of sentence complexity. In the first selection, I underlined and numbered the noun phrases that involve using prepositions and relative clause markers. However, if there was no such phrase in a given sentence, I underlined the verb phrase or the adverbial phrase. On the corresponding page, I translated the meaning of each underlined phrase into Chinese, following the order of the numbers. The appropriate meaning of each preposition, definition of vocabulary words, and the kernel structure of the noun phrase such as "the use of ... as" in the "the use of the book as a tool of..." were specified. If a kernel structure appeared more than 5 times in the following selections, I discontinued underlining the phrase thereafter. Where this underlining went on, only the verb phrases with distant prepositions, id-

ioms, low frequency phrases, and noun phrases with new vocabulary were underlined, translated, and explained. Students were required to read 10 topics per week and prepare for discussion in class. They were encouraged to predict the meaning of the underlined phrase before reading the translation and explanation on the corresponding page.

Many students, enthusiastic about using the NUTA approach, expressed as follows:

1. The content was highly motivating and predictable. (Most students said that they knew the content by reading the title because they had read the material in Chinese at either junior or senior high school. What they were eager to know was how the information was expressed in English.)

2. They were able to study without being interrupted due to frequent dictionary checking.

3. They could predict the underlined phrases for meaning and structures to assess how much they had already known.

4. They could look at relationships among words.

5. They could read beyond each sentence for text organization.

6. They were able to use reading strategies, like making predictions and using background knowledge.

7. The material helped them acquire vocabulary and idioms in a meaningful way.

8. It also helped them read in a great quantity at a setting.
9. It helped them independently form the language structure concepts.
10. It enabled them to see the repeating nature of sentence structures.
11. It used fewer English grammar terminologies.

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